

What is claimed is:

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1. A method comprising:
estimating a plurality of interpolated first color values from a
plurality of first color values in a sub-block of image data, wherein the image
data comprises first color values, second color values, and third color values;
deriving a plurality of second color hues using the second color
values and the interpolated first color values; and
estimating a plurality of interpolated second color hues using the
second color hues.
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2. The method of claim 1, further comprising:
deriving a second plurality of second color values from the plurality
of interpolated second color hues.
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3. The method of claim 1, further comprising:
deriving a plurality of third color hues using the third color values
and the interpolated first color values;
estimating a plurality of interpolated third color hues using the third
color hues; and
deriving a second plurality of third color values from the plurality of
interpolated third color hues.
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4. The method of claim 1, estimating a plurality of interpolated first
color values from a plurality of first color values in a sub-block of image data
further comprising:
identifying four direct neighbors in the sub-block; and

5 using the first color values from the four direct neighbors to
6 estimate an interpolated first color value.

1 5. The method of claim 4, using the first color values from the four
2 direct neighbors to estimate an interpolated first color value further comprising:
3 determining that the sub-block is a smooth zone; and
4 averaging four first color values from the four direct neighbors to
5 produce the interpolated first color value.

1 6. The method of claim 5, determining that the sub-block is a smooth
2 zone further comprising:
3 identifying four first color values for the four direct neighbors; and
4 determining that the four first color values are substantially similar.

1 7. The method of claim 4, using the first color values from the four
2 direct neighbors to estimate an interpolated first color value further comprising:
3 determining that the sub-block is an edge zone; and
4 averaging three of the four direct neighbors whose first color
5 values are similar to produce an edge zone average;
6 multiplying the edge zone average by a predetermined value to
7 produce a result; and
8 averaging the result with the remaining direct neighbor.

1 8. The method of claim 7, determining that the sub-block is an edge
2 zone further comprising:

6 derive a plurality of second color hues using the second color
7 values and the interpolated first color values; and
8 estimate a plurality of interpolated second color hues using the
9 second color hues.

1 19. The article of claim 18, further storing a software program for
2 enabling a processor-based system to:
3 derive a second plurality of second color values from the plurality of
4 interpolated second color hues.

1 20. The article of claim 19, further storing a software program for
2 enabling a processor-based system to:
3 derive a plurality of third color hues using the third color values and
4 the interpolated first color values;
5 estimate a plurality of interpolated third color hues using the third
6 color hues; and
7 derive a second plurality of third color values from the plurality of
8 interpolated third color hues.

1 21. The article of claim 20, further storing a software program for
2 enabling a processor-based system to:
3 identify four direct neighbors in the sub-block; and
4 use first color values from the four direct neighbors to estimate an
5 interpolated first color value.